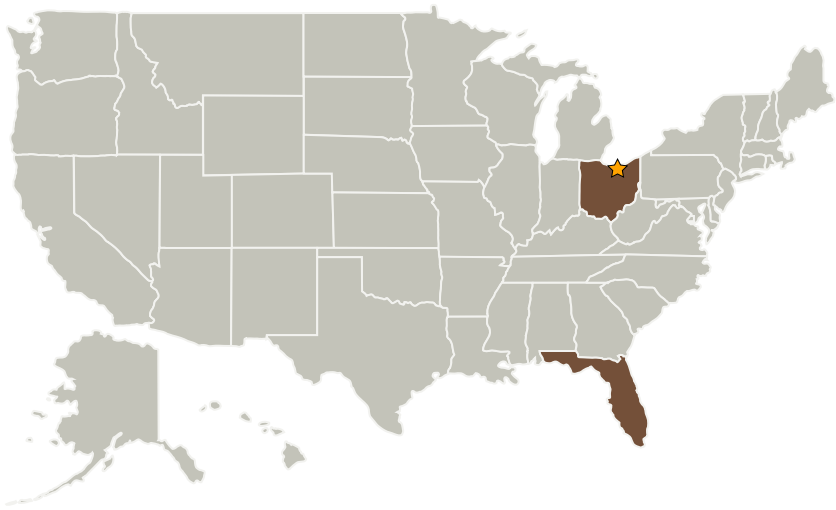
Reprogrammable Radiation Tolerant Secure Network Access Module, Phase I

Completed Technology Project (2007 - 2007)

Project Introduction

Communications security (COMSEC) is essential to satellite communications. Its role continues to grow as the available bandwidth expands to meet the ever increasing strategic and tactical data requirements of the 21st century. NASA's exploration of planetary surfaces will require a communication architecture that supports operational capabilities in which assets can communicate seamlessly and securely to coordinate exploration as well as communicate back to Earth. The flexibility and pervasiveness of the internet, including the transition to IPV6, is already being extended to military space assets -- e.g. the global grid. NASAs adoption of these same standards appears likely. The specific problem addressed by the Aeronix Phase I SBIR is to identify and develop modifications to our existing High Assurance Advanced Security Module (ASM) solution that satisfy the NASA networking requirements. The innovation of the proposed solution is the development of an unclassified IP based network encryptor that is compatible with commercially available ground based HAIPE equipment operating with Suite B algorithms and the ability to operate in the presence of failures caused by the harsh environment of space.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Aeronix, Inc.	Supporting Organization	Industry	Melbourne, Florida

Primary U.S. Work Locations	
Florida	Ohio

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.3 Internetworking
    - TX05.3.3 Information Assurance